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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/767,108

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John F. Aker

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INTELLECTUAL PROPERTY / TECHNOLOGY LAW

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RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

10/28/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/767,108	<b>Applicant(s)</b> AKER ET AL.	
	<b>Examiner</b> JULIAN MERCADO	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-11,13-17,19 and 34-44 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 34-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,5-11,13-17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7-13-08</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Remarks***

This Office action is responsive to applicant's amendment filed on July 13, 2008.

### ***Claim Rejections - 35 USC § 112***

The rejection of claims 1, 2, 5-10, 13-16 and 19 under 35 U.S.C. 112, second paragraph has been withdrawn. The examiner acknowledges applicant's assertion that the instant application provides an express definition for the term "fast charging" in paragraph [0002] on page 2 of the specification.

### ***Election/Restrictions***

Amended claim 2 and newly submitted claims 34-44 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claim 2 as amended is drawn to the non-elected species made without traverse and drawn to a thermal management system comprising a terminal strap and cover. Newly submitted claims 34-44 depend directly or indirectly from claim 2.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 2 and 34-44 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

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***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 5-11, 13-17 and 19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a plate member having a downdraft fan on which fan assemblies are mounted, does not reasonably provide enablement for a plate member including at least one opening wherein each plate member opening has disposed *therein* a downdraft fan, as recited in independent claims 1 and 15. (emphasis added) See par. [0075] of the specification and Figure 6 of the drawings, which show the fans mounted on top (not in, therein or otherwise within) the plate member. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Claims 5-11, 13, 14, 16, 17 and 19 are rejected under 35 U.S.C. 112 as being dependent upon a rejected base claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 15, 16 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamada et al. (U.S. Pat. 5,800,942).

The rejection is maintained for the reasons of record. The examiner notes the amendment to independent claims 1 and 15 now reciting, inter alia, a plate member overlying and parallelly aligned with said top face to form a gap therebetween.... This feature is considered shown by cover [16], which forms a gap between the top face of the battery. As to a gap opening along side edges of the plate member..., this feature is considered shown in Figure 16 insofar as the plate member having a gap on the bottom side. Note that this gap is communicating with an ambient environment, as shown by the arrows showing the direction of ventilation. It is through the gap and through side edges of the plate member (edges shown by "connecting pieces 13"). See col. 11 lines 3-43.

The examiner notes that the amendment to claim 2 is merely the feature in claim 1 as previously presented and now canceled which is drawn to the non-elected species of a terminal and strap cover.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (U.S. Pat. 5,800,942).

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This rejection is maintained for the detailed reasons of record. The examiner notes that no salient arguments for this ground of rejection have been submitted for consideration.

Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (U.S. Pat. 5,800,942) in view of Arai et al. (U.S. Pat. 6,204,769).

The teachings of Hamada et al. are discussed above and maintained for the reasons of record.

Hamada et al. does not explicitly teach thermal monitoring circuitry. However, Arai et al. teaches, as part of a battery control system, an ECU [15] which monitors a load [15] and is responsive to "detection data on operational and working conditions of the battery 11..." as well as a detected voltage or detected battery temperature. The ECU is readable on the claimed thermal monitoring circuitry, e.g. "[i]f the battery temperature abnormally rises, the ECU 15 drives a motor (not shown) of the cooling fan 26 to be rotated for air-cooling the battery 11." See col. 5 line 15 et seq. and col. 6 line 50 et seq. Thus, the skilled artisan would find obvious to modify Hamada et al.'s invention by employing thermal monitoring circuitry. The motivation for such a modification is "for air-cooling the battery" and doing so in a manner "without an alarm to a driver, who is thus kept free from extra anxieties, when driving." See col. 4 lines 12-14 and col. 2 line 56 et seq.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (U.S. Pat. 5,800,942) in view of Clements et al. (U.S. Pat. 6,690,576).

The teachings of Hamada et al. are discussed above and maintained for the reasons of record.

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In Hamada et al., it appears to the examiner that the opening for the fan [26] is cylindrical, as indicated in Figure 17. The shape of the opening would be obvious as cylindrical, at least to the skilled artisan, to allow for clearance for the spinning blades of the fan, as schematically shown by the blade of the fan being circumscribed within a circle in the Figure. While Hamada et al. does not explicitly teach the fan in a collar, Clements et al. teaches a collar housing for a fan, as shown in Figure 1, which has a "finger guard", i.e. grate. See col. 2 line 30 et seq. The skilled artisan would find obvious to employ a collar in Hamada et al. The motivation for such a modification is to allow for "replacement of individual fan units" and in order to "maximize[s] the ventilation area in the airflow pathway" by virtue of the fan being offset within the collar. See Clements et al. in col. 1 lines 33-53.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (U.S. Pat. 5,800,942) in view of Barrett Jr. (U.S. Pat. 3,904,439).

The teachings of Hamada et al. are discussed above and maintained for the reasons of record.

Hamada et al. does not explicitly teach the plate member as being hinged. However, Barrett Jr. teaches a cover for a battery box that is hinged and pivoting on its ends. See col. 1 line 5 et seq. and line 22 et seq. The skilled artisan would find obvious to modify Hamada et al. by employing a hinged plate member. The motivation for such a modification is to provide for an "openable top" so that "batteries could be interchanged at will." (ib.)

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Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (U.S. Pat. 5,800,942) in view of Leskovec (U.S. Pat. 4,355,695).

The teachings of Hamada et al. are discussed above and maintained for the reasons of record.

Hamada et al. does not explicitly teach the battery positioned below the seat of a vehicle. However, Leskovec teaches a battery [26] positioned in this manner. See Figure 2. The skilled artisan would find obvious to modify Hamada et al. by positioning the battery below the vehicle's seat. The motivation for such a modification is to allow for "simple and swift removal" of the battery unit. See col. 1 line 11 et seq.

### ***Response to Arguments***

Applicant's arguments filed with the present amendment have been fully considered but they are not persuasive. Citing Figure 17 of Hamada et al., applicant submits that "[t]his structure does not provide an open side gap between the plate and top face of the battery for lateral discharge of the cooling gas into the ambient environment." (response on page 14) This argument is not persuasive, as the claims merely recite "a gap opening along side edges of the plate member" and is wholly silent on this opening being for lateral discharge. Contrary to the assertions, there is no language in the claim that requires the gap opening to be between the plate and the top face of the battery for lateral discharge. Instead, the claims merely require a plate member forming a gap with the top face of the battery terminals, and as a separate clause, "a gap opening along side edges of the plate member...." In the prior Office action, reference character [24] was relied upon to read on applicant's claimed plate member. In consideration of the



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present amendment, reference character [16] is now relied upon to teach this feature. Cover [16] forms a gap between the top face of the battery with a gap opening along side edges of the plate member communicating with the ambient environment (note the ventilation indicated by arrows), albeit on the bottom side but nonetheless still a "side" as required by the present claims. Given that Hamada et al.'s top plate [16] has side edges which are pointed downwards, the opening defined therein would resultantly be *along* its side edges, albeit also facing in the downward direction.

Arguments directed to Hamada et al. having a longer residence time for cooling as compared to applicant's claimed invention have been fully considered but are not found persuasive. Firstly, the scope of the present claims is not considered to be limited to a lateral discharge. Secondly, to the extent that any differences shown fall under an obviousness determination, applicant is reminded that attorney arguments are not evidence and cannot take place of evidence in the record; an assertion of what appears to be present in comparing applicant's and the prior art's respective disclosures is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness. See MPEP 2145.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

/Julian Mercado/  
Examiner, Art Unit 1795

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795